

FINAL STAFF ASSESSMENT AND ADDENDUMS

AIR QUALITY CONDITIONS OF CERTIFICATION

TESLA (O1-AFC-21)

AIR QUALITY

STAFF RECOMMENDED CONDITIONS OF CERTIFICATION

AQ-C1 The project owner shall designate and retain an on-site air quality construction mitigation manager (AQCMM) who shall be responsible for maintaining compliance with conditions **AQ-C2** through **AQ-C3** for the entire project site and linear facility construction. The on-site AQCMM may delegate responsibilities identified in Conditions **AQ-C1** through **AQ-C3** to one or more air quality construction mitigation monitors. The on-site AQCMM shall have full access to areas of construction of the project site and linear facilities, and shall have the authority to appeal to the CPM to have the CPM stop any or all construction activities as warranted by applicable construction mitigation conditions. The AQCMM may have other responsibilities in addition to those described in this condition. The on-site AQCMM shall not be terminated without written consent of the CPM.

Verification: At least 60 days prior to the start of ground disturbance, the project owner shall submit to the CPM, for approval, the name, contact information and qualifications for the on-site AQCMM and air quality construction mitigation monitors. The AQCMM and all delegated monitors must be approved by the CPM before the start of ground disturbance.

AQ-C2 The project owner shall provide a construction mitigation plan, for approval, which shows the steps that will be taken, and reporting requirements, to ensure compliance with condition **AQ-C3**.

Verification: At least 60 days prior to start any ground disturbance, the project owner shall submit to the CPM, for approval, the construction mitigation plan. The CPM will notify the project owner of any necessary modifications to the plan within 30 days from the date of receipt.

AQ-C3 The on-site AQCMM shall submit to the CPM, in the Monthly Compliance Report (MCR), a construction mitigation report that demonstrates compliance with the following mitigation measures for the purposes of preventing fugitive dust plumes from leaving the project site and controlling other construction-related emissions:

- a) All unpaved roads and disturbed areas in the project and linear construction sites shall be watered every four hours of construction activities, or as necessary to prevent fugitive dust plumes from leaving the project site. The frequency of watering can be reduced or eliminated during periods of precipitation.
- b) No vehicle shall exceed 10 miles per hour within the construction site.

- c) The construction site entrances shall be posted with visible speed limit signs.
- d) All construction vehicle tires shall be inspected and washed as necessary to be cleaned free of dirt prior to entering paved roadways.
- e) Gravel ramps of at least 20 feet in length must be provided at the tire washing/cleaning station.
- f) All unpaved exits from the construction site shall be graveled or treated with dust soil stabilization compounds to prevent track-out to public roadways.
- g) All construction vehicles shall enter the construction site through the treated entrance roadways, unless an alternative route has been submitted to and approved by the CPM.
- h) Construction areas adjacent to any paved roadway shall be provided with sandbags or other measures as specified in the Storm Water Pollution Prevention Plan, to prevent run-off to the roadways.
- i) All paved roads within the construction site shall be swept as necessary to prevent the accumulation of dirt and debris.
- j) At least the first 500 feet of any public roadway exiting from the construction site shall be swept as necessary to prevent the accumulation of dirt and debris.
- k) All soil storage piles and disturbed areas that remain inactive for longer than 10 days shall be covered, or shall be treated with appropriate dust suppressant compounds.
- l) All vehicles that are used to transport solid bulk material and that have potential to cause visible emissions shall be provided with a cover, or the materials shall be sufficiently wetted and loaded onto the trucks in a manner to provide at least one foot of freeboard.
- m) Wind erosion control techniques, such as windbreaks, water, chemical dust suppressants and vegetation, shall be used on all construction areas that may be disturbed. Any windbreaks installed to comply with this condition shall remain in place until the soil is stabilized or permanently covered with vegetation.
- n) All diesel-fueled engines used in the construction of the facility shall be fueled only with ultra-low sulfur diesel, which contains no more than 15 ppm sulfur.
- o) All large construction diesel engines that have a rating of 50 hp or more, shall meet, at a minimum, the Tier 1 ARB/ U.S. EPA certified standards for off-road equipment, unless certified by the on-site AQCMM that a certified engine is not available for a particular item of equipment.
- p) In the event a Tier 1 ARB/U.S. EPA certified engine is not available for an off-road construction diesel engine larger than 50 hp, that engine shall be equipped with a catalyzed diesel particulate filter (soot filter), unless certified by engine manufacturers or the on-site AQCMM that the use of

such devices is not practical for specific engine types or that the equipment is on-site for ten (10) days or less.

- q) All diesel-fueled engines used in the construction of the facility shall have clearly visible tags issued by the on-site AQCMM that shows the engine meets the conditions **AQ-C3(o)** and **AQ-C3(p)** above.
- r) All heavy earthmoving equipment and heavy duty construction related trucks shall be properly maintained and the engines tuned to the engine manufacturer's specifications.
- s) All heavy construction equipment shall not remain running at idle for more than five minutes, to the extent practical.

The on-site AQCMM shall monitor the construction activities for visible dust plumes. Observations of visible dust plumes, especially those beyond the project fence line, indicate that mitigation measures are not resulting in effective mitigation. The AQCMM shall implement the following procedures for additional mitigation measures in the event that visible dust plumes are observed:

- t) The AQCMM shall direct more aggressive application of the existing mitigation methods within 15 minutes of making such a determination.
- u) The AQCMM shall direct implementation of additional methods of dust suppression if step (t) specified above, fails to result in adequate mitigation within 30 minutes of the original determination.
- v) The AQCMM shall direct a temporary shutdown of the activity causing the emissions if step (u) specified above fails to result in adequate mitigation within one hour of the original determination. The activity shall not restart until one full hour after the shutdown. The owner/operator may appeal to the CPM any directive from the AQCMM to shutdown an activity, provided that the shutdown shall go into effect within one hour of the original determination unless overruled by the CPM before that time.

Verification: In the MCR, the project owner shall provide the CPM a copy of the construction mitigation report and copies of diesel fuel purchase records, which clearly demonstrate compliance with condition **AQ-C3**.

AQ-C4 Deleted

AQ-C5 The project owner shall submit to the CPM for review and approval any modification proposed by either the project owner or issuing agency to any project air permit.

Verification: The project owner shall submit any proposed air permit modification to the CPM within five working days of its submittal either by 1) the project owner to an

agency, or 2) receipt of proposed modifications from an agency. The project owner shall submit all modified air permits to the CPM within 15 days of receipt.

AQ-C6 The project owner shall demonstrate that the following listed emission reduction credits will be surrendered to meet the requirements of **AQ-46** and **AQ-47**. If additional ERCs are submitted, the project owner shall submit an updated list including the additional ERCs to the CPM. The project owner shall request CPM approval for any substitutions, modifications, or additions of credits listed. The CPM, in consultation with the District, may approve any such change to the ERC list provided that the project remains in compliance with all applicable laws, ordinances, regulations, and standards, the requested change(s) clearly will not cause the project to result in a significant environmental impact, and each requested change is consistent with applicable federal and state laws and regulations. The CPM may also consult the U.S. EPA to determine compliance of credits.

BAAQMD ERC Number, Original Applicant, and Location	NO _x (tpy)	PM ₁₀ (tpy)	VOC (tpy)
#710, Western Spray Painting, Santa Clara			5.14
#718, National Semiconductor, Santa Clara			45.00
#719, Fairchild Advanced Lab, Palo Alto			4.99
#720, C&H Sugar, Crockett	48.96		
#721, C & H Sugar, Crockett		0.09	2.35
#778, Crown, Cork, & Seal, Union City	1.56	0.12	0.09
#798, Crown, Cork, & Seal, Fremont	2.69		0.15
#767, Pacific Lithograph, San Francisco	1.30		5.68
#762, Rexam Beverage Can, San Leandro			38.99
#773, Hunt-Wesson Foods, Hayward	21.00		
#780, Maxxim Medical, Los Gatos	4.96	0.39	2.88
#800, Phoenix Iron Works, Oakland		1.20	
#830, Gaylord Container, Antioch	171.00		
#831, Crown Zellerbach, Antioch and/or proposed at Altamont Landfill		189.00	

Verification: The project owner/operator shall submit to the CPM records showing that the project's emission reduction credit requirements have been met within 15 days of the demonstration required by **AQ-46**. If the CPM approves a substitution or modification to the list of ERCs, the CPM shall file a statement of the approval with the project owner and commission docket. The CPM shall maintain an updated list of approved ERCs for the project.

AQ-C7 The project owner shall limit facility emissions equivalent to the amounts shown in Table AQ-C7A. The seasonal emission limits in Table AQ-C7A shall be increased, subject to CPM approval, to reflect all emission reductions obtained under this condition by the owner/operator on a ton for ton basis, up to a maximum increase in the amount of the targets shown in Table AQ-C7B. Seasonal emission limits shall be updated to reflect the project owner/operator's progress in securing emission reductions. Notwithstanding the above, the project

owner/operator shall also comply with all emission rate limits set forth in Conditions AQ-1 to AQ-62.

**TABLE AQ-C7A
SEASONAL EMISSION LIMITS¹**

<i>Seasonal Period</i>	<i>Quarter</i>	<i>NO_x (ton)</i>	<i>PM10 (ton)</i>	<i>SO_x (ton)</i>	<i>VOC (ton)</i>
October through March	Q1&Q4	103.1	48.7	7.4	--
April through September	Q2&Q3	95.8	--	--	19.9

¹The seasonal emission limits shown above are base amounts assuming no emission reductions are obtained by the owner/operator. Seasonal emission limits shall be increased by the value of the emission reductions actually achieved for each seasonal period. (For example, if 10 ton of NO_x reduction is obtained in Q1/Q4, the October through March seasonal emission limit would be increased as follows: 103.1 ton + 10 ton = 113.1 ton).

²-- denotes no seasonal limit for the period

**TABLE AQ-C7B
EMISSION REDUCTION TARGETS**

<i>Seasonal Period</i>	<i>Quarter</i>	<i>NO_x (ton)</i>	<i>PM10 (ton)</i>	<i>SO_x (ton)</i>	<i>VOC (ton)</i>
October through March	Q1&Q4	21.9	46.3	7.4	--
April through September	Q2&Q3	29.1	--	--	10.3

The emissions reductions to be used by the project owner/operator to increase the Seasonal Emission Limits set forth in Table AQ-C7A and satisfy the targets in Table AQ-C7B shall be obtained through an emission reduction program administered by the San Joaquin Valley Air Pollution Control District and/or an air quality improvement program administered by the City of Tracy, as follows.

- a) The project owner/operator may use the Air Quality Mitigation Agreement and/or an air quality improvement program between FPL Energy and the City of Tracy, administered by the City of Tracy, as a means to achieve some or all of the emission reductions. The project owner/operator shall provide to the CPM for review and approval a copy of an initial plan for allocating the funds or identification of the method of obtaining the emission reduction targets. The project owner/operator shall also submit reports for CPM review and approval identifying the emission reductions achieved to-date.
- b) The project owner/operator may acquire and surrender to the SJVAPCD emission reduction credits to achieve some or all of the emission reductions to increase seasonal emission limits.
- c) The project owner/operator shall use its best efforts to obtain emission reductions in the northern region of the San Joaquin Valley. If, despite demonstrated best efforts, it is not feasible to obtain the requisite emission reductions within the northern region of the San Joaquin Valley, emission reductions from outside the northern region of the San Joaquin Valley will be permitted, subject to CPM review and approval.

- d) NO_x emission reductions obtained from the period April through September (Quarters 2 & 3) may be used to increase NO_x seasonal emission limits during either seasonal period.
- e) Interpollutant emission reductions shall be permitted under this condition at the ratios specified below:
 - NO_x reductions for PM₁₀ emissions: 2.2:1
 - SO₂ reductions for PM₁₀ emissions: 1.2:1
 - NO_x reductions for VOC emissions: 1:1
 - NO_x reductions for SO₂ emissions: 2:1
- f) No double or multiple counting of interpollutant reductions shall be allowed.

The seasonal emission limits set forth in Table AQ-C7A shall be applicable commencing upon the start of first combustion turbine fire. Once the project owner/operator has obtained the full amounts of the emission reduction targets identified in Table AQ-C7B to the satisfaction of the CPM the seasonal emission limits specified above will no longer apply.

Emission reduction credits from years prior to 1990 (pre-1990 credits) shall only be allowed with concurrence from U.S. EPA. The northern region of the San Joaquin Valley is defined as San Joaquin, Stanislaus, and Merced Counties.

Verification: Sixty (60) days after the delivery of the first Combustion Turbine Generator (CTG) to the project site, the project owner/operator shall provide evidence to the CPM of having provided the funds identified in the Air Quality Mitigation Agreement to the San Joaquin Valley Air Pollution Control District (SJVAPCD) along with the initial plan for allocating the funds or identifying alternate emission reductions. After first combustion turbine firing, the project owner/operator shall provide the CPM with seasonal semi-annual reports (by January 30 and July 30 of each year of operation) documenting compliance with the emission limits of this condition. The semi-annual report shall list the tons of emission reductions obtained in the San Joaquin Valley, the date the reduction occurred, the method used to secure these reductions, the location of emission reductions, and the running total emission reduction credits secured and surrendered, if any. The report shall account for any interseasonal or interpollutant credit applied under AQ-C7(d) or (e). Emissions data to verify compliance with each seasonal cap shall be derived from data submitted as required by Condition **AQ-13** or Condition **AQ-40**. Each semi-annual seasonal report shall include an updated determination of applicable facility seasonal emission limits by revising Table AQ-C7A.

AQ-C8 The project owner/operator shall determine the daily circulating water flow to the cooling towers using pump data.

Verification: The project owner shall submit to the CPM the daily cooling tower recirculating water flow data as part of the Quarterly Air Quality Report required by the verification of condition **AQ-40**.

BAAQMD CONDITIONS OF CERTIFICATION

All definitions presented in the Bay Area Air Quality Management District's Preliminary Determination of Compliance for the TPP apply to the following Conditions of Certification.

DEFINITIONS

Clock Hour:	Any continuous 60-minute period beginning on the hour
Calendar Day:	Any continuous 24-hour period beginning at 12:00 AM or 0000 hours
Year:	Any consecutive twelve-month period of time
Heat Input:	All heat inputs refer to the heat input at the higher heating value (HHV) of the fuel, in BTU/scf
Rolling 3-hour period:	Any consecutive three-hour period, not including start-up or shutdown periods
Firing Hours:	Period of time during which fuel is flowing to a unit, measured in minutes
MM BTU:	million British thermal units
Gas Turbine Start-up Mode:	The lesser of the first 300 minutes of continuous fuel flow to the Gas Turbine after fuel flow is initiated or the period of time from Gas Turbine fuel flow initiation until the Gas Turbine achieves two consecutive CEM data points in compliance with the emission concentration limits of condition AQ-24(b) and AQ-24(d)
Gas Turbine Shutdown Mode:	The lesser of the 30 minute period immediately prior to the termination of fuel flow to the Gas Turbine or the period of time from non-compliance with any requirement listed in condition AQ-24(b) through 24(d) until termination of fuel flow to the Gas Turbine
Gas Turbine Cold Start-up:	A gas turbine start-up that occurs more than 48 hours after a gas turbine shutdown
Gas Turbine Hot Start-up:	A gas turbine start-up that occurs within 8 hours of a gas turbine shutdown
Gas Turbine Warm Start-up:	A gas turbine start-up that occurs between 8 hours and 48 hours of a gas turbine shutdown
Specified PAHs:	<p>The polycyclic aromatic hydrocarbons listed below shall be considered to be Specified PAHs for these permit conditions. Any emission limits for Specified PAHs refer to the sum of the emissions for all six of the following compounds:</p> <p>Benzo[a]anthracene Benzo[b]fluoranthene Benzo[k]fluoranthene</p>

Benzo[a]pyrene
Dibenzo[a,h]anthracene
Indeno[1,2,3-cd]pyrene

- Corrected Concentration:** The concentration of any pollutant (generally NO_x, CO, or NH₃) corrected to a standard stack gas oxygen concentration. For emission points P-1 (combined exhaust of S-1 Gas Turbine and S-2 HRSG duct burners), P-2 (combined exhaust of S-3 Gas Turbine and S-4 HRSG duct burners), P-3 (combined exhaust of S-5 Gas Turbine and S-6 HRSG duct burners), P-4 (combined exhaust of S-7 Gas Turbine and S-8 HRSG duct burners) the standard stack gas oxygen concentration is 15% O₂ by volume on a dry basis
- Commissioning Activities:** All testing, adjustment, tuning, and calibration activities recommended by the equipment manufacturers and the TPP construction contractor to insure safe and reliable steady state operation of the gas turbines, heat recovery steam generators, steam turbine, and associated electrical delivery systems
- Commissioning Period:** The Period shall commence when all mechanical, electrical, and control systems are installed and individual system start-up has been completed, or when a gas turbine is first fired, whichever occurs first. The period shall terminate when the plant has completed performance testing, is available for commercial operation, and has initiated sales to the power exchange. The commissioning period shall not exceed 180 days under any circumstances. The period shall be determined separately for each power train representing a unique combination of one combustion turbine and one steam generator.
- Precursor Organic Compounds (POCs):** Any compound of carbon, excluding methane, ethane, carbon monoxide, carbon dioxide, carbonic acid, metallic carbides or carbonates, and ammonium carbonate
- CEC CPM:** California Energy Commission Compliance Program Manager
- TPP:** Tesla Power Project

Process Equipment

- S-1 Combustion Gas Turbine #1, General Electric PG 7241 (7FA); 1875.5 MM BTU per hour, equipped with dry low-NO_x Combustors, abated by A-1 Oxidation Catalyst and A-2 Selective Catalytic Reduction System

- S-2 Heat Recovery Steam Generator #1, equipped with dry low-NO_x Duct Burners, 272.2 MM BTU per hour, abated by A-1 Oxidation Catalyst and A-2 Selective Catalytic Reduction System
- S-3 Combustion Gas Turbine #2, General Electric PG 7241 (7FA); 1875.5 MM BTU per hour, equipped with dry low-NO_x Combustors, abated by A-3 Oxidation Catalyst and A-4 Selective Catalytic Reduction System
- S-4 Heat Recovery Steam Generator #2, equipped with dry low-NO_x Duct Burners, 272.2 MM BTU per hour, abated by A-3 Oxidation Catalyst and A-4 Selective Catalytic Reduction System
- S-5 Combustion Gas Turbine #3, General Electric PG 7241 (7FA); 1875.5 MM BTU per hour, equipped with dry low-NO_x Combustors, abated by A-5 Oxidation Catalyst and A-6 Selective Catalytic Reduction System
- S-6 Heat Recovery Steam Generator #3, equipped with dry low-NO_x Duct Burners, 272.2 MM BTU per hour, abated by A-5 Oxidation Catalyst and A-6 Selective Catalytic Reduction System
- S-7 Combustion Gas Turbine #4, General Electric PG 7241 (7FA); 1875.5 MM BTU per hour, equipped with dry low-NO_x Combustors, abated by A-5 Oxidation Catalyst and A-6 Selective Catalytic Reduction System
- S-8 Heat Recovery Steam Generator #4, equipped with dry low-NO_x Duct Burners, 272.2 MM BTU per hour, abated by A-5 Oxidation Catalyst and A-6 Selective Catalytic Reduction System
- S-9 Fire Pump Diesel Engine, Make and Model to be determined, 368 bhp, 19 gallons per hour

Verification: Conditions **AQ-1** through **AQ-14** shall only apply during the commissioning period. Unless otherwise indicated, conditions **AQ-15** through **AQ-62** shall apply after the commissioning period has ended.

AQ-1 The owner/operator of the Tesla Power Project (TPP) shall minimize emissions of carbon monoxide and nitrogen oxides from S-1, S-3, S-5, and S-7 Gas Turbines and S-2, S-4, S-6, and S-8 Heat Recovery Steam Generators (HRSGs) to the maximum extent possible during the commissioning period.

Verification: The project owner/operator shall propose a schedule of compliance with this Condition of Certification in the Commissioning Plan required by condition **AQ-5** and document continuing compliance with this Condition of Certification in each Monthly Emission Report required by condition **AQ-13**.

AQ-2 At the earliest feasible opportunity in accordance with the recommendations of the equipment manufacturers and the construction contractor, the owner/operator shall tune the S-1, S-3, S-5, & S-7 Gas Turbine combustors and S-2, S-4, S-6, & S-8 Heat Recovery Steam Generator duct burners to minimize the emissions of carbon monoxide and nitrogen oxides.

Verification: The project owner/operator shall propose a schedule of compliance with this Condition of Certification in the Commissioning Plan required by condition **AQ-5** and document continuing compliance with this Condition of Certification in each Monthly Emission Report required by condition **AQ-13**.

AQ-3 At the earliest feasible opportunity in accordance with the recommendations of the equipment manufacturers and the construction contractor, owner/operator shall install, adjust, and operate the A-1, A-3, A-5, & A-7 Oxidation Catalysts and A-2, A-4, A-6, & A-8 SCR Systems to minimize the emissions of carbon monoxide and nitrogen oxides from S-1, S-3, S-5, & S-7 Gas Turbines and S-2, S-4, S-6, & S-8 Heat Recovery Steam Generators.

Verification: The project owner/operator shall propose a schedule of compliance with this Condition of Certification in the Commissioning Plan required by condition **AQ-5** and document continuing compliance with this Condition of Certification in each Monthly Emission Report required by condition **AQ-13**.

AQ-4 Coincident with the steady-state operation of A-2, A-4, A-6, & A-8 SCR Systems and A-1, A-3, A-5, & A-7 Oxidation Catalysts pursuant to conditions **AQ-3**, **AQ-9**, **AQ-10**, and **AQ-11**, the owner/operator shall operate the Gas Turbines (S-1, S-3, S-5, & S-7) and the HRSGs (S-2, S-4, S-6, & S-8) in such a manner as to comply with the NO_x and CO emission limitations specified in conditions **AQ-24(a)** through **AQ-24(d)**.

Verification: The project owner/operator shall propose a schedule of compliance with this Condition of Certification in the Commissioning Plan required by condition **AQ-5** and document continuing compliance with this Condition of Certification in each Monthly Emission Report required by condition **AQ-13**.

AQ-5 The owner/operator of the TPP shall submit a plan to the District Permit Services Division and the CEC CPM at least four weeks prior to first firing of S-1, S-3, S-5, or S-7 Gas Turbines describing the procedures to be followed during the commissioning of the gas turbines, HRSGs, and steam turbines. The plan shall include a description of each commissioning activity, the anticipated duration of each activity in hours, and the purpose of the activity. The activities described shall include, but not be limited to, the tuning of the Dry-Low-NO_x combustors, the installation and operation of the required emission control systems, the installation, calibration, and testing of the CO and NO_x continuous emission monitors, and any activities requiring the firing of the Gas Turbines (S-1, S-3, S-5, & S-7) and HRSGs (S-2, S-4, S-6, & S-8) without abatement by their respective oxidation catalysts and/or SCR Systems. The owner/operator shall not fire any of the Gas Turbines (S-1, S-3, S-5, or S-7) sooner than 28 days after the District receives the commissioning plan.

Verification: The project owner/operator shall submit a Commissioning Plan to the District Permit Services Division and the CPM for approval at least four (4) weeks prior to first fire of S-1, S-2, S-3, S-4, S-5, S-6, S-7, and S-8.

AQ-6 During the commissioning period, the owner/operator of the TPP shall demonstrate compliance with conditions **AQ-13**, **AQ-14**, and **AQ-15**

(excluding fuel sulfur content limit) through the use of properly operated and maintained continuous emission monitors and data recorders for the following parameters:

- a. firing hours
- b. fuel flow rates
- c. stack gas nitrogen oxide emission concentrations
- d. stack gas carbon monoxide emission concentrations
- e. stack gas oxygen concentrations.

The monitored parameters shall be recorded at least once every 15 minutes (excluding normal calibration periods or when the monitored source is not in operation) for the Gas Turbines (S-1, S-3, S-5, & S-7), HRSGs (S-2, S-4, S-6, & S-8). The owner/operator shall use District-approved methods to calculate heat input rates, nitrogen dioxide mass emission rates, carbon monoxide mass emission rates, and NO_x and CO emission concentrations, summarized for each clock hour and each calendar day. The owner/operator shall retain records on site for at least 5 years from the date of entry and make such records available to District personnel upon request.

Verification: The project owner/operator shall propose a schedule of compliance with this Condition of Certification in the Commissioning Plan required by condition **AQ-5** and document continuing compliance with this Condition of Certification in each Monthly Emission Report required by condition **AQ-13**.

AQ-7 The owner/operator shall install, calibrate, and operate the District-approved continuous monitors specified in condition **AQ-6** prior to first firing of the Gas Turbines (S-1, S-3, S-5, & S-7) and Heat Recovery Steam Generators (S-2, S-4, S-6, & S-8). After first firing of the turbines, the owner/operator shall adjust the detection range of these continuous emission monitors as necessary to accurately measure the resulting range of CO and NO_x emission concentrations. The type, specifications, and location of these monitors shall be subject to District review and approval.

Verification: The project owner/operator shall notify the District and CPM of the date of expected first fire at least 30 days prior to first fire and shall make the project site available for inspection if desired by either the District or CPM. The project owner/operator shall propose a schedule of compliance with this Condition of Certification in the Commissioning Plan required by condition **AQ-5** and document continuing compliance with this Condition of Certification in each Monthly Emission Report required by condition **AQ-13**

AQ-8 The owner/operator shall not fire the S-1 Gas Turbine and S-2 Heat Recovery Steam Generator without abatement of nitrogen oxide emissions by A-1 SCR System and/or abatement of carbon monoxide emissions by A-2 Oxidation Catalyst for more than 300 hours during the commissioning period. Such operation of S-1 Gas Turbine and S-2 HRSG without abatement shall be limited to discrete commissioning activities that can only be properly executed without the SCR system and/or oxidation catalyst in place. Upon completion

of these activities, the owner/operator shall provide written notice to the District Permit Services and Enforcement Divisions and the unused balance of the 300 firing hours without abatement shall expire.

Verification: The project owner/operator shall submit documentation of compliance with the Condition of Certification in the Monthly Emission Report required by condition **AQ-13**.

AQ-9 The owner/operator shall not fire the S-3 Gas Turbine and S-4 Heat Recovery Steam Generator without abatement of nitrogen oxide emissions by A-3 SCR System and/or abatement of carbon monoxide emissions by A-4 Oxidation Catalyst for more than 300 hours during the commissioning period. Such operation of S-3 Gas Turbine and S-4 HRSG without abatement shall be limited to discrete commissioning activities that can only be properly executed without the SCR system and/or oxidation catalyst in place. Upon completion of these activities, the owner/operator shall provide written notice to the District Permit Services and Enforcement Divisions and the unused balance of the 300 firing hours without abatement shall expire.

Verification: The project owner/operator shall submit documentation of compliance with the Condition of Certification in the Monthly Emission Report required by condition **AQ-13**.

AQ-10 The owner/operator shall not fire the S-5 Gas Turbine and S-6 Heat Recovery Steam Generator without abatement of nitrogen oxide emissions by A-5 SCR System and/or abatement of carbon monoxide emissions by A-6 Oxidation Catalyst for more than 300 hours during the commissioning period. Such operation of S-5 Gas Turbine and S-6 HRSG without abatement shall be limited to discrete commissioning activities that can only be properly executed without the SCR system and/or oxidation catalyst in place. Upon completion of these activities, the owner/operator shall provide written notice to the District Permit Services and Enforcement Divisions and the unused balance of the 300 firing hours without abatement shall expire.

Verification: The project owner/operator shall submit documentation of compliance with the Condition of Certification in the Monthly Emission Report required by condition **AQ-13**.

AQ-11 The owner/operator shall not fire the S-7 Gas Turbine and S-8 Heat Recovery Steam Generator without abatement of nitrogen oxide emissions by A-5 SCR System and/or abatement of carbon monoxide emissions by A-6 Oxidation Catalyst for more than 300 hours during the commissioning period. Such operation of S-5 Gas Turbine and S-6 HRSG without abatement shall be limited to discrete commissioning activities that can only be properly executed without the SCR system and/or oxidation catalyst in place. Upon completion of these activities, the owner/operator shall provide written notice to the District Permit Services and Enforcement Divisions and the unused balance of the 300 firing hours without abatement shall expire.

Verification: The project owner/operator shall submit documentation of compliance with the Condition of Certification in the Monthly Emission Report required by condition **AQ-13**.

AQ-12 The total mass emissions of nitrogen oxides, carbon monoxide, precursor organic compounds, PM₁₀, and sulfur dioxide that are emitted by the Gas Turbines (S-1, S-3, S-5, & S-7), Heat Recovery Steam Generators (S-2, S-4, S-6, & S-8) and S-9 Fire Pump Diesel Engine during the commissioning period shall accrue towards the consecutive twelve-month emission limitations specified in condition **AQ-29**.

Verification: The project owner/operator shall submit documentation of compliance with the Condition of Certification in the Monthly Emission Report required by condition **AQ-13**.

AQ-13 The owner/operator shall not operate the Gas Turbines (S-1, S-3, S-5, & S-7) and Heat Recovery Steam Generators (S-2, S-4, S-6, & S-8) in a manner such that the combined pollutant emissions from these sources will exceed the following limits during the commissioning period. These emission limits shall include emissions resulting from the start-up and shutdown of the Gas Turbines (S-1, S-3, S-5, & S-7).

NO _x (as NO ₂)	3,732 pounds per calendar day	622 pounds per hour
CO	2,289 pounds per calendar day	381.6 pounds per hour
POC (as CH ₄)	1,080 pounds per calendar day	
PM ₁₀	306 pounds per calendar day	
SO ₂	48 pounds per calendar day	

Verification: During the Commissioning Period, as defined in the District FDOC, the project owner/operator shall submit to the CPM for approval, a Monthly Emission Report that includes, but is not limited to, fuel use, turbine operation, post combustion control operation, ammonia use and CEM readings on an hourly and daily basis. The Monthly Emissions Report for each month must be submitted by the 15th (or the following Monday if the 15th is a Saturday or Sunday) of the following month.

AQ-14 No less than 45 days prior to the end of the Commissioning Period, the Owner/Operator shall conduct District and Energy Commission approved source tests using external continuous emission monitors to determine compliance with the emission limitations specified in condition **AQ-25**. The source tests shall determine NO_x, CO, and POC emissions during start-up and shutdown of the gas turbines. The POC emissions shall be analyzed for methane and ethane to account for the presence of unburned natural gas. The source test shall include a minimum of three start-up and three shutdown periods and shall include at least one cold start, one warm start, and one hot start. Twenty working days before the execution of the source tests, the Owner/Operator shall submit to the District and the CEC Compliance Program Manager (CPM) a detailed source test plan designed to satisfy the requirements of this condition. The District and the CEC CPM will notify the Owner/Operator of any necessary modifications to the plan within 20 working days of receipt of the plan; otherwise, the plan shall be deemed approved.

The Owner/Operator shall incorporate the District and CEC CPM comments into the test plan. The Owner/Operator shall notify the District and the CEC CPM within seven (7) working days prior to the planned source testing date. The owner/operator shall submit the source test results to the District and the CEC CPM within 30 days of the source testing date.

Verification: No later than 20 working days before the execution of the source tests, the owner/operator shall submit to the District and the CPM a detailed source test plan designed to satisfy the requirements of this condition. The District and the CPM will notify the owner/operator of any necessary modifications to the plan within 20 working days of receipt of the plan; otherwise, the plan shall be deemed approved. The owner/operator shall incorporate the District and the CPM comments into the test plan. The owner/operator shall notify the District and the CPM within seven working days prior to the planned source testing date. Source test results shall be submitted to the District and the CPM within 30 days of the source testing date.

Permit Conditions for the Gas Turbines (S-1, S-3, S-5, & S-7) and the Heat Recovery Steam Generators (HRSGs; S-2, S-4, S-6, & S-8)

AQ-15 The owner/operator shall fire the Gas Turbines (S-1, S-3, S-5, and S-7) and HRSG Duct Burners (S-2, S-4, S-6, and S-8) exclusively on natural gas with a maximum sulfur content of 0.33 grain per 100 standard cubic feet. To demonstrate compliance with this limit, the operator of S-1 through S-8 shall sample and analyze the gas from each supply source at least once every 30 consecutive days to determine the sulfur content of the gas. (BACT for SO₂ and PM₁₀)

Verification: The project owner/operator shall make the project site available for inspection at any time by representatives of the District, CARB, U.S. EPA and the Energy Commission. The project owner/operator shall submit documentation of compliance with this Condition of Certification as part of the Quarterly Air Quality Report required by the verification of condition **AQ-40**.

AQ-16 The owner/operator shall not operate the units such that the combined heat input rate to each power train consisting of a Gas Turbine and its associated HRSG (S-1 & S-2, S-3 & S-4, S-5 & S-6, and S-7 & S-8) exceeds 2,147.7 MM BTU (HHV) per hour, averaged over any rolling three hour period. (PSD for NO_x)

Verification: A detailed report of fuel use and equipment operation shall be included in the Quarterly Air Quality Report required by the verification of condition **AQ-40**.

AQ-17 The owner/operator shall not operate the units such that the combined heat input rate to each power train consisting of a Gas Turbine and its associated HRSG (S-1 & S-2, S-3 & S-4, S-5 & S-6, and S-7 & S-8) exceeds 51,544.8 MM BTU (HHV) per calendar day. (PSD for PM₁₀)

Verification: A detailed report of fuel use and equipment operation shall be included in the Quarterly Air Quality Report required by the verification of condition **AQ-40**.

AQ-18 The owner/operator shall not operate the units such that the combined cumulative heat input rate for the Gas Turbines (S-1, S-3, S-5, & S-7) and the HRSGs (S-2, S-4, S-6, & S-8) exceeds 62,985,372 MM BTU (HHV) per year. (Offsets)

Verification: A detailed report of fuel use and equipment operation shall be included in each January Quarterly Air Quality Report required by the verification of condition **AQ-40**.

AQ-19 The owner/operator shall not fire the HRSG duct burners (S-2, S-4, S-6, and S-8) unless its associated Gas Turbine (S-1, S-3, S-5, and S-7, respectively) is in operation. (BACT for NO_x)

Verification: The project owner/operator shall submit documentation of compliance with this Condition of Certification as part of the Quarterly Air Quality Report required by the verification of condition **AQ-40**.

AQ-20 The owner/operator shall ensure that the S-1 Gas Turbine and S-2 HRSG are abated by the properly operated and properly maintained A-2 Selective Catalytic Reduction (SCR) System whenever fuel is combusted at those sources and the A-2 SCR catalyst bed has reached minimum operating temperature. (BACT for NO_x)

Verification: The project owner/operator shall make the project site available for inspection at any time by representatives of the District, CARB, U.S. EPA and the Energy Commission.

AQ-21 The owner/operator shall ensure that the S-3 Gas Turbine and S-4 HRSG are abated by the properly operated and properly maintained A-4 Selective Catalytic Reduction (SCR) System whenever fuel is combusted at those sources and the A-4 SCR catalyst bed has reached minimum operating temperature. (BACT for NO_x)

Verification: The project owner/operator shall make the project site available for inspection at any time by representatives of the District, CARB, U.S. EPA and the Energy Commission.

AQ-22 The owner/operator shall ensure that the S-5 Gas Turbine and S-6 HRSG are abated by the properly operated and properly maintained A-6 Selective Catalytic Reduction (SCR) System whenever fuel is combusted at those sources and the A-6 SCR catalyst bed has reached minimum operating temperature. (BACT for NO_x)

Verification: The project owner/operator shall make the project site available for inspection at any time by representatives of the District, CARB, U.S. EPA and the Energy Commission.

AQ-23 The owner/operator shall ensure that the S-7 Gas Turbine and S-8 HRSG are abated by the properly operated and properly maintained A-8 Selective Catalytic Reduction (SCR) System whenever fuel is combusted at those sources and the A-8 SCR catalyst bed has reached minimum operating temperature. (BACT for NO_x)

Verification: The project owner/operator shall make the project site available for inspection at any time by representatives of the District, CARB, U.S. EPA and the Energy Commission.

- AQ-24** The owner/operator shall ensure that the Gas Turbines (S-1, S-3, S-5, & S-7) and HRSGs (S-2, S-4, S-6, & S-8) comply with requirements (a) through (h) under all operating scenarios, including duct burner firing mode. Requirements (a) through (h) do not apply during a gas turbine start-up or shutdown. (BACT, PSD, and Toxic Risk Management Policy)
- (a) Nitrogen oxide mass emissions (calculated as NO₂) at P-1 (the combined exhaust point for S-1 Gas Turbine and S-2 HRSG after abatement by A-2 SCR System) shall not exceed 15.67 pounds per hour or 0.00731 lb/MM BTU (HHV) of natural gas fired. Nitrogen oxide mass emissions (calculated as NO₂) at P-2 (the combined exhaust point for S-3 Gas Turbine and S-4 HRSG after abatement by A-4 SCR System) shall not exceed 15.67 pounds per hour or 0.00731 lb/MM BTU (HHV) of natural gas fired. Nitrogen oxide mass emissions (calculated as NO₂) at P-3 (the combined exhaust point for S-5 Gas Turbine and S-6 HRSG after abatement by A-6 SCR System) shall not exceed 15.67 pounds per hour or 0.00731 lb/MM BTU (HHV) of natural gas fired. Nitrogen oxide mass emissions (calculated as NO₂) at P-4 (the combined exhaust point for S-7 Gas Turbine and S-8 HRSG after abatement by A-8 SCR System) shall not exceed 15.67 pounds per hour or 0.00731 lb/MM BTU (HHV) of natural gas fired. (PSD for NO_x)
 - (b) The nitrogen oxide emission concentration at emission points P-1, P-2, P-3, and P-4 each shall not exceed 2.0 ppmv, on a dry basis, corrected to 15% O₂, averaged over any 1-hour period. (BACT for NO_x)
 - (c) Carbon monoxide mass emissions at P-1, P-2, P-3, and P-4 each shall not exceed 19.08 pounds per hour or 0.0088 lb/MM BTU of natural gas fired, averaged over any rolling 3-hour period. (PSD for CO)
 - (d) The carbon monoxide emission concentration at P-1, P-2, P-3, and P-4 each shall not exceed 4.0 ppmv, on a dry basis, corrected to 15% O₂, averaged over any rolling 3-hour period. (BACT for CO)
 - (e) Ammonia (NH₃) emission concentrations at P-1, P-2, P-3, and P-4 each shall not exceed 5 ppmv, on a dry basis, corrected to 15% O₂, averaged over any rolling 3-hour period. This ammonia emission concentration shall be verified by the continuous recording of the ammonia injection rate to A-2, A-4, A-6, and A-8 SCR Systems. The correlation between the gas turbine and HRSG heat input rates, A-2, A-4, A-6, and A-8 SCR System ammonia injection rates, and corresponding ammonia emission concentration at emission points P-1, P-2, P-3, and P-4 shall be determined in accordance with permit condition **AQ-34**. (TRMP for NH₃)
 - (f) Precursor organic compound (POC) mass emissions (as CH₄) at P-1, P-2, P-3, and P-4 each shall not exceed 4.42 pounds per hour or 0.00594 lb/MM BTU of natural gas fired. (BACT)

- (g) Sulfur dioxide (SO₂) mass emissions at P-1, P-2, P-3, and P-4 each shall not exceed 2.0 pounds per hour or 0.00092 lb/MM BTU of natural gas fired. (BACT)
- (h) Particulate matter (PM₁₀) mass emissions at P-1, P-2, P-3, and P-4 each shall not exceed 9 pounds per hour or 0.0048 lb PM₁₀/MM BTU of natural gas fired when the HRSG duct burners are not in operation. Particulate matter (PM₁₀) mass emissions at P-1, P-2, P-3, and P-4 each shall not exceed 12.75 pounds per hour or 0.00594 lb PM₁₀/MM BTU of natural gas fired when the HRSG duct burners are in operation. (BACT)

Verification: The project owner/operator shall submit documentation of compliance with this Condition of Certification as part of the Quarterly Air Quality Report required by the verification of condition **AQ-40**.

AQ-25 The owner/operator shall ensure that the regulated air pollutant mass emission rates from each of the Gas Turbines (S-1, S-3, S-5, and S-7) during a start-up does not exceed the limits established below. (PSD)

Pollutant	Gas Turbine Start-Up Emission Rate Limits	
	lb/hr	lb/start-up
NO _x (as NO ₂)	150	415.5
CO	662.5	1,180.5
POC (as CH ₄)	45	82

Verification: The project owner/operator shall submit documentation of compliance with the emission limits in this Condition of Certification as part of the Quarterly Air Quality Report required by the verification of condition **AQ-40**.

AQ-26 The owner/operator shall not allow more than two Gas Turbines (S-1, S-3, S-5, or S-7) to be in start-up mode at any point in time. The owner/operator shall start-up additional gas turbines (S-1, S-3, S-5, or S-7) only if both of the following requirements are met:

- 60 minutes has elapsed since the initiation of the start-up of the first pair of turbines
- the first pair of turbines are operating in compliance with the NO_x and CO emission limitations of condition **AQ-24**. (PSD)

Verification: The project owner/operator shall submit documentation of all start-up events as part of the Quarterly Air Quality Report required by the verification of condition **AQ-40**.

AQ-27 The owner/operator shall not allow total combined emissions from the Gas Turbines and HRSGs (S-1, S-2, S-3, S-4, S-5, S-6, S-7, and S-8), including emissions generated during Gas Turbine start-ups and shutdowns to exceed the following limits during any one hour:

- 331.3 pounds of NO_x (as NO₂) per hour
- 1,362.8 pounds of CO per hour (PSD)

Verification: The project owner/operator shall submit documentation of compliance with all emission limits specified in this Condition of Certification as part of the Quarterly Air Quality Report required by the verification of condition **AQ-40**.

AQ-28 The owner/operator shall not allow total combined emissions from the Gas Turbines and HRSGs (S-1, S-2, S-3, S-4, S-5, S-6, S-7, and S-8) and S-9 Fire Pump Diesel Engine, including emissions generated during Gas Turbine start-ups and shutdowns to exceed the following limits during any calendar day:

- (a) 2,824.4 pounds of NO_x (as NO₂) per day (CEQA)
- (b) 6,284 pounds of CO per day (PSD)
- (c) 678.4 pounds of POC (as CH₄) per day (CEQA)
- (d) 1,224 pounds of PM₁₀ per day (PSD)
(February 1 through October 31)
- (e) 1,080 pounds of PM₁₀ per day (PSD)
(November 1 through January 31)
- (f) 192 pounds of SO₂ per day (BACT)

Verification: The project owner/operator shall submit documentation of compliance with all emission limits specified in this Condition of Certification as part of the Quarterly Air Quality Report required by the verification of condition **AQ-40**.

AQ-29 The owner/operator shall not allow cumulative combined emissions from the Gas Turbines and HRSGs (S-1, S-2, S-3, S-4, S-5, S-6, S-7, and S-8) and S-9 Fire Pump Diesel Engine, including emissions generated during gas turbine start-ups and shutdowns to exceed the following limits during any consecutive twelve-month period:

- (a) 249.85 tons of NO_x (as NO₂) per year (Offsets)
- (b) 335.66 tons of CO per year (Cumulative Increase, PSD)
- (c) 60.44 tons of POC (as CH₄) per year (Offsets)
- (d) 189.95 tons of PM₁₀ per year (Offsets)
- (e) 29.55 tons of SO₂ per year (Cumulative Increase)

Verification: The project owner/operator shall submit documentation of compliance with all emission limits specified in this Condition of Certification as part of the Quarterly Air Quality Report required by the verification of condition **AQ-40**.

AQ-30 The owner/operator shall not allow the maximum projected annual toxic air contaminant emissions (per condition **AQ-33**) from the Gas Turbines and HRSGs (S-1, S-2, S-3, S-4, S-5, S-6, S-7, and S-8) combined to exceed the following limits:

- formaldehyde 17,657 pounds per year
 - benzene 732 pounds per year
 - Specified polycyclic aromatic hydrocarbons (PAHs) 6 pounds per year
- unless the following requirement is satisfied:

The owner/operator shall perform a health risk assessment to determine the total facility risk using the emission rates determined by source testing and the most current Bay Area Air Quality Management District approved procedures and unit risk factors in effect at the time of the analysis. The owner/operator shall submit the risk analysis to the District and the CEC CPM within 60 days of the source test date. The owner/operator may request that the District and the CEC CPM revise the carcinogenic compound emission limits specified above. If the owner/operator demonstrates to the satisfaction of the APCO that these revised emission limits will not result in a significant cancer risk, the District and the CEC CPM may, at their discretion, adjust the carcinogenic compound emission limits listed above. (TRMP)

Verification: If prepared, the health risk analysis shall be submitted to the District and the CPM within 60 days of the source test date. Otherwise, the project owner/operator shall submit documentation of compliance with all emission limits specified in this Condition of Certification as part of the January 30 Quarterly Air Quality Report each year required by the verification of condition **AQ-40**.

AQ-31 The owner/operator shall demonstrate compliance with conditions **AQ-16** through **AQ-19**, **AQ-24(a)** through **AQ-24(d)**, and **AQ-25** through **AQ-29** by using properly operated and maintained continuous monitors (during all hours of operation including gas turbine start-up and shutdown periods) for all of the following parameters:

- (a) Firing Hours and Fuel Flow Rates for each of the following sources: S-1 & S-2 combined, S-3 & S-4 combined, S-5 & S-6 combined, and S-7 & S-8 combined.
- (b) Oxygen (O₂) Concentration, Nitrogen Oxides (NO_x) Concentration, and Carbon Monoxide (CO) Concentration at exhaust points P-1, P-2, P-3, and P-4.
- (c) Ammonia injection rate at A-2, A-4, A-6, and A-8 SCR Systems
- (d) Deleted by District.

The owner/operator shall record all of the above parameters every 15 minutes (excluding normal calibration periods) and shall summarize all of the above parameters for each clock hour. For each calendar day, the owner/operator shall calculate and record the total firing hours, the average hourly fuel flow rates, and pollutant emission concentrations.

The owner/operator shall use the parameters measured above and District approved calculation methods to calculate the following parameters:

- (e) Heat Input Rate for each of the following sources: S-1 & S-2 combined, S-3 & S-4 combined, S-5 & S-6 combined, and S-7 & S-8.
- (f) Corrected NO_x concentration, NO_x mass emission rate (as NO₂), corrected CO concentration, and CO mass emission rate at each of the following exhaust points: P-1, P-2, P-3, and P-4.

For each source, source grouping, or exhaust point, the owner/operator shall record the parameters specified in conditions **AQ-31(e)** and **AQ-31(f)** at least once every 15 minutes (excluding normal calibration periods). As specified below, the owner/operator shall calculate and record the following data:

- (g) total Heat Input Rate for every clock hour and the average hourly Heat Input Rate for every rolling 3-hour period.
- (h) on an hourly basis, the cumulative total Heat Input Rate for each calendar day for the following: each Gas Turbine and associated HRSG combined and all eight sources (S-1, S-2, S-3, S-4, S-5, S-6, S-7, & S-8) combined.
- (i) the average NO_x mass emission rate (as NO₂), CO mass emission rate, and corrected NO_x and CO emission concentrations for every clock hour and for every rolling 3-hour period.
- (j) on an hourly basis, the cumulative total NO_x mass emissions (as NO₂) and the cumulative total CO mass emissions, for each calendar day for the following: each Gas Turbine and associated HRSG combined and all eight sources (S-1, S-2, S-3, S-4, S-5, S-6, S-7, & S-8) combined.
- (k) For each calendar day, the average hourly Heat Input Rates, Corrected NO_x emission concentration, NO_x mass emission rate (as NO₂), corrected CO emission concentration, and CO mass emission rate for each Gas Turbine and associated HRSG combined.
- (l) on a daily basis, the cumulative total NO_x mass emissions (as NO₂) and cumulative total CO mass emissions, for the previous consecutive twelve month period for all eight sources (S-1, S-2, S-3, S-4, S-5, S-6, S-7, & S-8) combined.

(1-520.1, 9-9-501, BACT, Offsets, NSPS, PSD, Cumulative Increase)

Verification: The project owner/operator shall submit documentation of each of the parameters specified in this Condition of Certification as part of the Quarterly Air Quality Report required by the verification of condition **AQ-40**.

AQ-32 To demonstrate compliance with conditions **AQ-24(f)**, **AQ-24(g)**, **AQ-24(h)**, **AQ-25**, **AQ-28(c)** through **AQ-28(f)**, and **AQ-29(c)** through **AQ-29(e)**, the owner/operator shall calculate and record on a daily basis, the Precursor Organic Compound (POC) mass emissions, Fine Particulate Matter (PM₁₀) mass emissions (including condensable particulate matter), and Sulfur Dioxide (SO₂) mass emissions from each power train. The owner/operator shall use the actual heat input rates measured pursuant to condition **AQ-31**, actual Gas Turbine start-up times, actual Gas Turbine shutdown times, and Energy Commission- and District-approved emission factors developed pursuant to source testing under condition **AQ-35** to calculate these emissions. The owner/operator shall present the calculated emissions in the following format:

- (a) For each calendar day, POC, PM₁₀, and SO₂ emissions, summarized for each power train (Gas Turbine and its respective HRSG combined) and all eight sources (S-1, S-2, S-3, S-4, S-5, S-6, S-7, & S-8) combined
- (b) on a daily basis, the cumulative total POC, PM₁₀, and SO₂ mass emissions, for each year for all eight sources (S-1, S-2, S-3, S-4, S-5, S-6, S-7, & S-8) combined
(Offsets, PSD, Cumulative Increase)

Verification: The project owner/operator shall submit documentation of each of the parameters specified in this Condition of Certification as part of the Quarterly Air Quality Report required by the verification of condition **AQ-40**.

AQ-33 To demonstrate compliance with condition **AQ-30**, the owner/operator shall calculate and record on an annual basis the maximum projected annual emissions of: Formaldehyde, Benzene, and Specified PAH's. The owner/operator shall calculate the maximum projected annual emissions using the maximum annual heat input rate of 62,152,696 MM BTU/year and the highest emission factor (pounds of pollutant per MM BTU of heat input) determined by any source test of the S-1, S-3, S-5, and S-7 Gas Turbines and/or S-2, S-4, S-6, and S-8 Heat Recovery Steam Generators. If the highest emission factor for a given pollutant occurs during minimum-load turbine operation, a reduced annual heat input rate may be utilized to calculate the maximum projected annual emissions to reflect the reduced heat input rates during gas turbine start-up and minimum-load operation. The reduced annual heat input rate shall be subject to District review and approval. (TRMP)

Verification: The project owner/operator shall submit documentation of each of the parameters specified in this Condition of Certification as part of the Quarterly Air Quality Report required by the verification of condition **AQ-40**.

AQ-34 Prior to the end of the commissioning period for the TPP, the owner/operator shall conduct a District-approved source test on exhaust point P-1, P-2, P-3, or P-4 to determine the corrected ammonia (NH₃) emission concentration to determine compliance with condition **AQ-24(e)**. The source test shall determine the correlation between the heat input rates of the gas turbine and associated HRSG, A-2, A-4, A-6, or A-8 SCR System ammonia injection rate, and the corresponding NH₃ emission concentration at emission point P-1, P-2, P-3, or P-4. The source test shall be conducted over the expected operating range of the turbine and HRSG (including minimum and full load) to establish the range of ammonia injection rates necessary to achieve NO_x emission reductions while maintaining ammonia slip levels. The owner/operator shall repeat the source testing on an annual basis thereafter. Ongoing compliance with condition **AQ-24(e)** shall be demonstrated through calculations of corrected ammonia concentrations based upon the source test correlation and continuous records of ammonia injection rate. (TRMP)

Verification: Initial source testing shall be completed prior to the end of the commissioning period. No later than 20 working days before the execution of the source tests, the owner/operator shall submit to the District and the CPM a detailed source test

plan designed to satisfy the requirements of this condition. The District and the CPM will notify the owner/operator of any necessary modifications to the plan within 20 working days of receipt of the plan; otherwise, the plan shall be deemed approved. The owner/operator shall incorporate the District and CPM comments into the test plan. The owner/operator shall notify the District and the CPM within seven working days prior to the planned source testing date. Source test results shall be submitted to the District and the CPM within 60 days of the source testing date.

AQ-35 Prior to the end of the commissioning period for the TPP and on an annual basis thereafter, the owner/operator shall conduct a District-approved source test on exhaust points P-1, P-2, P-3, and P-4 while each Gas Turbine and associated Heat Recovery Steam Generator are operating at maximum load to determine compliance with Conditions **AQ-24(a)**, **AQ-24(b)**, **AQ-24(c)**, **AQ-24(d)**, **AQ-24(f)**, **AQ-24(g)**, and **AQ-24(h)** and while each Gas Turbine and associated Heat Recovery Steam Generator are operating at minimum load to determine compliance with Conditions **AQ-24(c)** and **AQ-24(d)**, and to verify the accuracy of the continuous emission monitors required in condition **AQ-31**. The owner/operator shall test for (as a minimum): water content, stack gas flow rate, oxygen concentration, precursor organic compound concentration and mass emissions, nitrogen oxide concentration and mass emissions (as NO₂), carbon monoxide concentration and mass emissions, sulfur dioxide concentration and mass emissions, methane, ethane, and particulate matter (PM₁₀) emissions including condensable particulate matter. The owner/operator shall conduct the particulate matter (PM₁₀) source tests during the period of November 1 through January 31 of each year to verify compliance with condition **AQ-28(e)**. (BACT, offsets)

Verification: Initial source testing shall be completed prior to the end of the commissioning period. No later than 20 working days before the execution of the source tests, the owner/operator shall submit to the District and the CPM a detailed source test plan designed to satisfy the requirements of this condition. The District and the CPM will notify the owner/operator of any necessary modifications to the plan within 20 working days of receipt of the plan; otherwise, the plan shall be deemed approved. The owner/operator shall incorporate the District and CPM comments into the test plan. The owner/operator shall notify the District and the CPM within seven working days prior to the planned source testing date. Source test results shall be submitted to the District and the CPM within 60 days of the source testing date.

AQ-36 The owner/operator shall obtain approval for all source test procedures from the District's Source Test Section and the CEC CPM prior to conducting any tests. The owner/operator shall comply with all applicable testing requirements for continuous emission monitors as specified in Volume V of the District's Manual of Procedures. The owner/operator shall notify the District's Source Test Section and the CEC CPM in writing of the source test protocols and projected test dates at least 7 days prior to the testing date(s). As indicated above, the Owner/Operator shall measure the contribution of condensable PM (back half) to the total PM₁₀ emissions. However, the Owner/Operator may propose alternative measuring techniques to measure condensable PM such as the use of a dilution tunnel or other appropriate

method used to capture semi-volatile organic compounds. The owner/operator shall submit the source test results to the District and the CEC CPM within 60 days of conducting the tests. (BACT)

Verification: The project owner/operator shall submit documentation of the procedures and results of each source test conducted as part of the Quarterly Air Quality Report required by the verification of condition **AQ-40**.

AQ-37 Prior to the end of the commissioning period for the TPP and on a biennial basis (once every two years) thereafter, the owner/operator shall conduct a District-approved source test on exhaust point P-1, P-2, P-3, or P-4 while the Gas Turbine and associated Heat Recovery Steam Generator are operating at maximum allowable operating rates to demonstrate compliance with condition **AQ-30**. The owner/operator shall also test the gas turbine while it is operating at minimum load. If three consecutive biennial source tests demonstrate that the annual emission rates calculated pursuant to condition **AQ-30** for any of the compounds listed below are less than the BAAQMD Toxic Risk Management Policy trigger levels shown, then the owner/operator may discontinue future testing for that pollutant:

Benzene	≤	6.7 pounds/year
Formaldehyde	≤	33 pounds/year
Specified PAHs	≤	0.044 pounds/year

(TRMP)

Verification: Initial source testing shall be completed prior to the end of the commissioning period. No later than 20 working days before the execution of the source tests, the owner/operator shall submit to the District and the CPM a detailed source test plan designed to satisfy the requirements of this condition. The District and the CPM will notify the owner/operator of any necessary modifications to the plan within 20 working days of receipt of the plan; otherwise, the plan shall be deemed approved. The owner/operator shall incorporate the District and CPM comments into the test plan. The owner/operator shall notify the District and the CPM within seven working days prior to the planned source testing date. Source test results shall be submitted to the District and the CPM within 60 days of the source testing date.

AQ-38 The owner/operator shall not allow the total combined sulfuric acid mist (SAM) emissions from S-1 through S-8 to exceed 7 tons totaled over any consecutive twelve month period. The owner/operator shall calculate the SAM emission rate using the total heat input for the sources and the highest results of any source testing conducted pursuant to condition **AQ-39**. If this SAM mass emission limit is exceeded, the owner/operator must utilize air dispersion modeling to determine the impact (in $\mu\text{g}/\text{m}^3$) of the sulfuric acid mist emissions pursuant to Regulation 2-2-306. (PSD)

Verification: The project owner/operator shall submit documentation of compliance with all emission limits specified in this Condition of Certification as part of the Quarterly Air Quality Report required by the verification of condition **AQ-40**.

AQ-39 Prior to the end of the commissioning period for the TPP and on a semi-annual basis (twice per year) thereafter, the owner/operator shall conduct a District-approved source test on exhaust points P-1 through P-4 while each gas turbine and HRSG duct burner is operating at maximum heat input rates to demonstrate compliance with the SAM emission rates specified in condition **AQ-38**. The owner/operator shall test for (as a minimum) SO₂, SO₃, and H₂SO₄. After acquiring one year of source test data on these sources, the owner/operator may petition the District to reduce the test frequency to an annual basis if test result variability is sufficiently low as determined by the District. (PSD)

Verification: Initial source testing shall be completed prior to the end of the commissioning period. No later than 20 working days before the execution of the source tests, the owner/operator shall submit to the District and the CPM a detailed source test plan designed to satisfy the requirements of this condition. The District and the CPM will notify the owner/operator of any necessary modifications to the plan within 20 working days of receipt of the plan; otherwise, the plan shall be deemed approved. The owner/operator shall incorporate the District and CPM comments into the test plan. The owner/operator shall notify the District and the CPM within seven working days prior to the planned source testing date. Source test results shall be submitted to the District and the CPM within 60 days of the source testing date.

AQ-40 The owner/operator of the TPP shall submit all reports (including, but not limited to monthly CEM reports, monitor breakdown reports, emission excess reports, equipment breakdown reports, etc.) as required by District Rules or Regulations and in accordance with all procedures and time limits specified in the Rule, Regulation, Manual of Procedures, or Enforcement Division Policies & Procedures Manual. (Regulation 2-6-502)

Verification: The project owner/operator shall submit a Quarterly Air Quality Report (QAQR) for the preceding calendar quarter by January 30, April 30, July 30 and October 30 of each year. Each QAQR shall include, but not be limited to, a compliance matrix, a summary of operations activities, and a summary of all reports covered by this condition. The January 30 report for each year shall include an annual summary of the four Quarterly Air Quality Reports covering the preceding calendar year. The reports shall be submitted to the California Energy Commission Compliance Project Manager (CPM).

AQ-41 The owner/operator of the TPP shall maintain all records and reports on site for a minimum of 5 years. These records shall include but are not limited to: continuous monitoring records (firing hours, fuel flows, emission rates, monitor excesses, breakdowns, etc.), source test and analytical records, natural gas sulfur content analysis results, emission calculation records, records of plant upsets and related incidents. The owner/operator shall make all records and reports available to District and the CEC CPM staff upon request. (Regulation 2-6-501)

Verification: The project owner/operator shall maintain a copy of each Quarterly Air Quality Report on site for a minimum of five years.

AQ-42 The owner/operator of the TPP shall notify the District and the CEC CPM of any violations of these permit conditions. Notification shall be submitted in a timely manner, in accordance with all applicable District Rules, Regulations, and the Manual of Procedures. Notwithstanding the notification and reporting requirements given in any District Rule, Regulation, or the Manual of Procedures, the owner/operator shall submit written notification (facsimile is acceptable) to the Enforcement Division within 96 hours of the violation of any permit condition. (Regulation 2-1-403)

Verification: The project owner/operator shall include a compliance matrix in the Quarterly Air Quality Report required by the verification condition **AQ-40**. The Compliance Matrix shall summarize the project's compliance status for each condition during the reporting period.

AQ-43 The owner/operator shall ensure that the stack height of emission points P-1, P-2, P-3, and P-4 is each at least 200 feet above grade level at the stack base. (PSD, TRMP)

Verification: Prior to the first firing of natural gas in the turbines, the owner/operator shall provide as built drawings of the stack or other suitable proof of the minimum stack height to the District and the CPM.

AQ-44 The Owner/Operator of TPP shall provide adequate stack sampling ports and platforms to enable the performance of source testing. The location and configuration of the stack sampling ports shall comply with the District Manual of Procedures, Volume IV, Source Test Policy and Procedures, and shall be subject to BAAQMD review and approval. (Regulation 1-501)

Verification: Prior to the first firing of natural gas in the turbines, the owner/operator shall provide as built drawings or other suitable proof of compliance with this Condition of Certification to the District and the CPM.

AQ-45 Within 180 days of the issuance of the Authority to Construct for the TPP, the Owner/Operator shall contact the BAAQMD Technical Services Division regarding requirements for the continuous emission monitors, sampling ports, platforms, and source tests required by conditions **AQ-31, 34, 35, 37, and 51**. The owner/operator shall conduct all source testing and monitoring in accordance with the BAAQMD Manual of Procedures. (Regulation 1-501)

Verification: The project owner/operator shall submit documentation of compliance with this Condition of Certification as part of the Quarterly Air Quality Report required by the verification of condition **AQ-40**.

AQ-46 Prior to the issuance of the BAAQMD Authority to Construct for the Tesla Power Project, the Owner/Operator shall demonstrate that valid emission reduction credits in the amount of 287.328 tons/year of Nitrogen Oxides, 69.5 tons/year of Precursor Organic Compounds, and 189.95 tons/year of PM₁₀ or equivalent (as defined by District Regulations 2-2-302.1 and 2-2-302.2) are under their control through enforceable contracts, option to purchase agreements, or equivalent binding legal documents. (Offsets)

Verification: The project owner/operator must submit all ERC documentation to the District and the CPM prior to the issuance of the BAAQMD Authority to Construct.

AQ-47 Prior to the start of construction of the Tesla Power Project, the Owner/Operator shall provide to the District valid emission reduction credit banking certificates in the amount of 287.328 tons/year of Nitrogen Oxides, 69.5 tons/year of Precursor Organic Compounds, and 189.95 tons/year of PM₁₀ or equivalent as defined by District Regulations 2-2-302.1 and 2-2-302.2. (Offsets, CEC)

Verification: The project owner/operator must submit all ERC documentation to the District and the CPM prior to the start of construction.

AQ-48 Pursuant to BAAQMD Regulation 2, Rule 6, section 404.1, the owner/operator of the TPP shall submit an application to the BAAQMD for a major facility review permit within 12 months of completing construction as demonstrated by the first firing of any gas turbine or HRSG duct burner. (Regulation 2-6-404.1)

Verification: The project owner/operator shall notify the CPM within ten working days of any application for, issuance of, and/or modification to any permit pertaining to air quality.

AQ-49 Pursuant to 40 CFR Part 72.30(b)(2)(ii) of the Federal Acid Rain Program, the owner/operator of the Tesla Power Project shall submit an application for a Title IV operating permit to the BAAQMD at least 24 months before operation of any of the gas turbines (S-1, S-3, S-5, or S-7) or HRSGs (S-2, S-4, S-6, or S-8). (Regulation 2, Rule 7)

Verification: The project owner/operator shall notify the CPM within ten working days of any application for, issuance of, and/or modification to any permit pertaining to air quality.

AQ-50 The owner/operator shall ensure that the Tesla Power Project complies with the continuous emission monitoring requirements of 40 CFR Part 75. (Regulation 2, Rule 7)

Verification: The project owner/operator shall submit documentation of compliance with this Condition of Certification as part of the Quarterly Air Quality Report required by the verification of condition **AQ-40**.

AQ-51 The owner/operator shall take monthly samples of the natural gas combusted at the TPP. The samples shall be analyzed for sulfur content using District-approved laboratory methods. The sulfur content test results shall be retained on site for a minimum of five years from the test date and shall be utilized to satisfy the requirements of 40 CFR Part 60, subpart GG. (cumulative increase)

Verification: The project owner/operator shall submit documentation of compliance with this Condition of Certification as part of the Quarterly Air Quality Report required by the verification of condition **AQ-40**.

Permit Conditions for Cooling Towers

AQ-52 The owner/operator shall properly install and maintain the cooling towers to minimize drift losses. The owner/operator shall equip the cooling towers with high-efficiency mist eliminators with a maximum guaranteed drift rate of 0.0005%. The maximum total dissolved solids (TDS) measured at the base of the cooling towers or at the point of return to the wastewater facility shall not be higher than 1,878 ppmw (mg/l). The owner/operator shall sample and test the cooling tower water at least once per day to verify compliance with this TDS limit. (PSD)

Verification: The project owner/operator shall submit documentation of compliance with this Condition of Certification, including a summary of all data collected in relation to this condition, as part of the Quarterly Air Quality Report required by the verification of condition **AQ-40**.

AQ-53 The owner/operator shall perform a visual inspection of the cooling tower drift eliminators at least once per calendar year, and repair or replace any drift eliminator components which are broken or missing. Prior to the initial operation of the Tesla Power Project, the owner/operator shall have the cooling tower vendor's field representative inspect the cooling tower drift eliminators and certify that the installation was performed in a satisfactory manner. For reasonable cause, the CPM may require the owner/operator to perform an initial performance source test to verify compliance with the vendor-guaranteed drift rate specified in condition **AQ-52**. The CPM may, in years 5 and 15 of cooling tower operation, require the owner/operator to perform source tests to verify continued compliance with the vendor-guaranteed drift rate specified in condition **AQ-52**. (PSD)

Verification: The project owner/operator shall submit documentation of compliance with this Condition of Certification, including color photographs, as part of the January Quarterly Air Quality Report required by the verification of condition **AQ-40**.

Permit Conditions for S-9 Fire Pump Diesel Engine

AQ-54 S-9 Fire Pump Diesel Engine is subject to the requirements of Regulation 9, Rule 1 ("Sulfur Dioxide"), and the requirements of Regulation 6 ("Particulate and Visible Emissions"). The engine may be subject to other District regulations, including Regulation 9, Rule 8 ("NO_x and CO from Stationary Internal Combustion Engines") in the future. (Regulation 9, Rule 1; Regulation 6)

Verification: The project owner/operator shall submit documentation of compliance with this Condition of Certification as part of the Quarterly Air Quality Report required by the verification of condition **AQ-40**.

AQ-55 The owner/operator shall ensure that S-9 is operated for no more than a total of 26 hours in any consecutive 12-month period for the purpose of reliability-related activities as defined by Regulation 9-8-232. (Offsets, BACT)

Verification: The project owner/operator shall submit documentation of S-9 Fire Pump Diesel Engine hours of operation for reliability-related activities as part of the Quarterly Air Quality Report required by the verification of condition **AQ-40**.

AQ-56 The owner/operator may cause S-9 to operate for an unlimited amount of time for the purpose of providing power for the emergency pumping of water.
(Regulation 9-8-330.1)

Verification: The project owner/operator shall submit documentation of S-9 Fire Pump Diesel Engine hours of operation for providing power for the emergency pumping of water as part of the Quarterly Air Quality Report required by the verification of condition **AQ-40**.

AQ-57 The owner/operator shall equip S-9 with a non-resettable totalizing counter which records hours of operation. (cumulative increase)

Verification: The project owner/operator shall make the project site available for inspection at any time by representatives of the District, CARB, U.S. EPA and the Energy Commission.

AQ-58 The owner/operator shall ensure that the sulfur content of all diesel fuel combusted at S-9 does not exceed 0.05% by weight. (TRMP, TBACT)

Verification: The project owner/operator shall submit documentation of S-9 Fire Pump Diesel Engine diesel fuel use and sulfur content certification as part of the Quarterly Air Quality Report required by the verification of condition **AQ-40**.

AQ-59 The owner/operator shall ensure that S-9 Fire Pump Diesel Engine shall achieve the following emission rates:

NO _x (as NO ₂)	6.9 g/bhp-hr
CO	1.75 g/bhp-hr
POC	1.5 g/bhp-hr
PM ₁₀	0.15 g/bhp-hr

(BACT, cumulative increase)

Verification: The project owner/operator shall submit documentation of compliance with the emission limits in this Condition of Certification as part of the Quarterly Air Quality Report required by the verification of condition **AQ-40**.

AQ-60 Within 60 days of the initial start-up of S-9, the owner/operator shall test the engine to determine the NO_x, CO, PM₁₀, and POC emission rates to verify compliance with condition **AQ-59**. The owner/operator shall utilize the following test methods for each pollutant as indicated below.

- (a) NO_x source testing shall be in accordance with the District's Manual of Procedures, Volume IV, ST-13A or B
- (b) CO source testing shall be in accordance with the District's Manual of Procedures, Volume IV, ST-6
- (c) POC source testing shall be in accordance with the District's Manual of Procedures, Volume IV, ST-7

- (d) PM₁₀ testing shall be in accordance with California Air Resources Board (CARB) test method 17.
(BACT, TRMP)

Verification: Initial source testing shall be completed within 60 days of start-up. No later than 20 working days before the execution of the source tests, the owner/operator shall submit to the District and the CPM a detailed source test plan designed to satisfy the requirements of this condition. The District and the CPM will notify the owner/operator of any necessary modifications to the plan within 20 working days of receipt of the plan; otherwise, the plan shall be deemed approved. The owner/operator shall incorporate the District and CPM comments into the test plan. The owner/operator shall notify the District and the CPM within seven working days prior to the planned source testing date. Source test results shall be submitted to the District and the CPM within 60 days of the source testing date.

AQ-61 If the Merged Stack Parameter (M) of the final specified fire pump diesel engine is less than 2.13E+07, then the owner/operator must perform a revised health risk assessment for the S-9 diesel engine particulate emissions. The health risk assessment will be subject to District review and approval. The Merged Stack Parameter (M) is defined as follows:

$$M = hVT/Q$$

where, h = stack height (in meters)
 V = stack gas volumetric flow rate (m³/s) at full load
 T = stack gas temperature (degrees Kelvin) at full load
 Q = diesel particulate emission rate (g/s) at full load
(TRMP)

Verification: If prepared, the health risk analysis shall be submitted to the District and the CPM within 60 days of the source test date of condition **AQ-60**. Otherwise, the project owner/operator shall submit documentation of compliance with all conditions specified in this Condition of Certification as part of the Quarterly Air Quality Report required by the verification of condition **AQ-40**.

AQ-62 The owner/operator shall maintain the following monthly records in a District-approved log for at least 5 years and make such records and logs available to the District upon request:

- a) total hours of operation for the purpose of reliability-related activities for S-9 and a description of the reliability-related activity
- b) total hours of operation for the purpose of the emergency pumping of water for S-9 and a description of the emergency condition
- c) fuel sulfur content (cumulative increase)

Verification: The project owner/operator shall submit documentation of S-9 Fire Pump Diesel Engine hours of operation, purpose, and fuel use as part of the Quarterly Air Quality Report required by the verification of condition **AQ-40**.